REMARKS

Entry of the foregoing amendments and reconsideration of this application is respectfully requested. The claims have been amended to rectify the inadvertent mistake in numbering. Applicants believe that this amendment overcomes the objection to claims 8-10. Also, claim 1 has been amended to more specifically set forth the invention. Claims 1-11 remain in the application.

As required by the above identified Office Action, formal drawings have been sent herewith.

Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Levinson et al. (US 2003/0053170 A1). Applicant respectfully traverses this rejection.

Referring first to claim 1, an optoelectronic transceiver is claimed that includes "an electrical-to-optical transmitter and an optical-to-electrical receiver each coupled to a digital diagnostic integrated circuit". Claim 1 further claims a control interface and "a microcontroller coupling the digital diagnostic integrated circuit to the control interface".

To understand the operation of a digital diagnostic integrated circuit, as used in optoelectronic transceivers, applicants have provided several brief background statements of operation. Turning specifically to applicants' specification, page 11, lines 8-16, it is explained that

> DDIC 14 provides optical transceiver 5 Enhanced Digital Diagnostics capability by using ICs (e.g. registers, control chips, optical monitoring chips, etc.) that enables end users to remotely monitor key module parameters to ensure system compatibility and operation within required operating ranges. Along with the standard module identification information, DDIC 14 allows Enhanced Diagnostics, which monitor parameters such as laser condition, optical power, internal temperature, and supply voltage.

Further, at page 12, lines 10-15 it is explained that

DDIC 14 can also feature enhanced diagnostics capabilities that allow users to check the performance of optical components. For example, there can be warning and alarm settings in the registers that automatically alert the end users if parameters go beyond a predetermined level. One such parameter is the laser bias current.

All of this is well understood by those of ordinary skill in the art but applicants stress the fact to show that the Levinson et al. control circuitry 150 simply performs the functions of a digital diagnostic integrated circuit.

Turning to the specification of Levinson et al. and particularly page 3, column 1, it is clear that control circuitry 150 is a digital diagnostic circuit since all of the functions described (i.e. in [0032] - [0039]) are digital diagnostic functions. Further, digital diagnostic circuit 150 is connected directly to the control interface "local I/O interface" and/or parallel-to-serial interface 122 and serial-to-parallel interface 112. This is further confirmed by the Levinson et al. statement at page 3, column 2, final lines of [0040], which state "Transceiver 100 can be attached to a host device through a serial interface."

Because of this direct connection between digital diagnostic circuit 150 and the serial interface, any changes

in network protocol or operations must be performed by the user and accomplished by reprogramming memory 222 (see Levinson et al. specification [0054]).

Applicants' novel optoelectronic module includes a microcontroller coupling the digital diagnostic integrated circuit to the control interface. Rather than having all information stored in dedicated locations, i.e. memory mapped architecture, as dictated by specific protocols, and reprogramming the memory whenever a protocol is changed, the microcontroller in the present invention can be used to fix addressing requirement changes without actually changing the digital diagnostic integrated circuit. Also, addresses of the various IC's of the digital diagnostic integrated circuit can be mapped according to different protocols. Thus, data or other information passing between the digital diagnostic integrated circuit and the interface (i.e. through the microcontroller) appears to be following whatever protocol is being used.

Applicants' method claim 7 specifies this feature in the step "using the microcontroller to map addresses of IC's in the digital diagnostic integrated circuit". Data or other information passing between the digital diagnostic integrated circuit and the interface (i.e. through the

microcontroller) appears to be following whatever protocol is being used but in fact the digital diagnostic integrated circuit has not been reprogrammed. Applicants believe that this is a substantial advantage.

In applicants' method claim 8 the step "using the microcontroller to add diagnostic functions of the optical transceiver module and components' is again a substantial advantage provided by the addition of the microcontroller, since the digital diagnostic integrated circuit 150 of Levinson et al. must be reprogrammed by the user to accomplish this function.

To anticipate an invention, every feature of the invention must be disclosed in the applied art. "All words in a claim must be considered in judging patentability of that claim against the prior art." *In re Wilson*, 424 F.2d 1382, 165 USPQ 494. 496 (CCPA 1970). Since Levinson et al. do not disclose a microcontroller coupling the digital diagnostic integrated circuit to the control interface applicants do not believe that Levinson et al. anticipate the present invention. Applicant believes that claims 1-11 are now in condition for allowance. Reconsideration is respectfully requested.

Should there be any questions or remaining issues regarding the foregoing, Examiner is cordially invited to telephone the undersigned attorney for a speedy resolution.

Respectfully requested,

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IN THE DRAWINGS

A replacement sheet of corrected drawings, including FIGS. 1 and 2, is included herewith.